



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,553	07/24/2003	Anthony Ross	044RE1	3530

30328 7590 07/17/2007  
JONATHAN SPANGLER  
NU VASIVE, INC.  
4545 TOWNE CENTRE COURT  
SAN DIEGO, CA 92121

EXAMINER
----------

PHILOGENE, PEDRO

ART UNIT	PAPER NUMBER
----------	--------------

3733

MAIL DATE	DELIVERY MODE
-----------	---------------

07/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/627,553

**Applicant(s)**

ROSS ET AL.

**Examiner**

Pedro Philogene

**Art Unit**

3733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/30/05, 4/26/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-13, 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Berggren (2,995,159).

With respect to claims 12, 24, Berggren discloses an injection device for injecting thermoplastic material, the injection device comprising a heating element (136) and a needle (44) for dispensing of the thermoplastic material. The thermoplastic capable of being heated to a flowable state at a predetermined temperature above the body temperature and thereafter cooling to return to a non-flowable state; as set forth in column 5, lines 29-30, and an injection device having a chamber (54) for receiving the thermoplastic material, a heating element (136) for heating the thermoplastic material to the flowable state, and a needle (44) for injecting the flowable thermoplastic material.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With respect to claims 13, 19-23, Berggren discloses all the limitations, as set forth in column 3, lines 10-20, column 5, lines 29-30, and as best seen in FIGS. 1-10.

Art Unit: 3733

Claims 12-16,19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Herskovitz et al. (4,357,136).

With respect to claims 12,24, Herskovitz et al disclose an injection device for injecting thermoplastic material, the injection device comprising a heating element (28,66) and a needle (38) for dispensing of the thermoplastic material. The thermoplastic capable of being heated to a flowable state at a predetermined temperature above the body temperature and thereafter cooling to return to a non-flowable state; and an injection device having a chamber, as best seen in FIG.2, for receiving the thermoplastic material, a heating element (28,66) for heating the thermoplastic material to the flowable state, and a needle (38) for injecting the flowable thermoplastic material.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With respect to claims 13-16,19-23, Herskovitz et al. disclose all the limitations, as set forth in column 3, lines 30-67, column 4, lines 1-67, column 5, lines 1-38, and as best seen in FIGS.1-4.

Claims 12-16,19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Brockway et al. (4,684,344).

With respect to claims 12,24, Brockway et al disclose an injection device for injecting thermoplastic material, the injection device comprising a heating element (30)

Art Unit: 3733

and a needle (42) for dispensing of the thermoplastic material. The thermoplastic capable of being heated to a flowable state at a predetermined temperature above the body temperature and thereafter cooling to return to a non-flowable state; and an injection device having a chamber (32), as best seen in FIG.1, for receiving the thermoplastic material, a heating element (30) for heating the thermoplastic material to the flowable state, and a needle (24) for injecting the flowable thermoplastic material.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With respect to claims 13-16,19-23, Brockway et al. disclose all the limitations, as set forth in column 2, lines 15-67, column 3, lines 1-37, column 4, lines 1-15, and as best seen in FIGS.1-4.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rockway et al. (4,684,344) in view of Mastrorio et al. (5,849,014).

It is noted that Rockway et al did not teach of an expandable sleeve about the needle to define an annulus, so that pressurized fluid communication with the annulus

Art Unit: 3733

expands the sleeve outwardly and the needle having openings; as claimed by applicant. However, in a similar art, Mastorio et al evidences the use of an expandable sleeve and a needle having openings for pressurizing the expandable sleeve to hold bone cement into the cavity.

Therefore, given the teaching of Mastrorio et al, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Rockway et al, as taught by Mastrotio et al to hold bone cement into the cavity.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herskovitz et al. (4,357,136) in view of Mastrorio et al. (5,849,014).

It is noted that Herskovitz et al did not teach of an expandable sleeve about the needle to define an annulus, so that pressurized fluid communication with the annulus expands the sleeve outwardly and the needle having openings; as claimed by applicant. However, in a similar art, Mastorio et al evidences the use of an expandable sleeve and a needle having openings for pressurizing the expandable sleeve to hold bone cement into the cavity.

Therefore, given the teaching of Mastrorio et al, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Herskovitz et al, as taught by Mastrotio et al to hold bone cement into the cavity.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6,168,432	1-2001	Marlin
-----------	--------	--------

5,934,903	8-1999	Marlin
-----------	--------	--------


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro Philogene whose telephone number is (571) 272-4716. The examiner can normally be reached on Monday to Friday 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272 - 4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pedro Philogene  
July 3, 2007

  
PEDRO PHILOGENE  
PRIMARY EXAMINER